CLAIMS

1. A MEMS array characterized by being provided with a plurality of elements and switches for connecting said elements and by enabling the elements to be freely interconnected.

2. A MEMS array as set forth in claim 1, wherein the switches connecting the elements are semiconductor switches.

3. A MEMS array as set forth in claim 1, wherein the switches connecting the elements are mechanical switches.

4. A MEMS array as set forth in claim 1, provided with a substrate and an interconnect layer, said substrate being formed with said switches, said interconnect layer provided with a plurality of elements connected through said switches.

5. A MEMS array as set forth in claim 4, wherein said substrate is provided with drive parts for driving said switches.

6. A MEMS array as set forth in claim 5, wherein said substrate is further provided with semiconductor circuits for signal processing.

7. A MEMS array as set forth in claim 6, wherein said semiconductor circuits have three-dimensional structures.

8. A MEMS array as set forth in claim 1, provided with a substrate and interconnect layer, said interconnect layer provided with a plurality of elements and switches for connecting the elements.

9. A MEMS array as set forth in claim 8, wherein said substrate is provided with drive parts for driving said switches.

10. A MEMS array as set forth in claim 9, wherein said substrate is provided with semiconductor circuits for signal processing.

11. A MEMS array as set forth in claim 10, wherein said semiconductor circuits have three-dimensional

structures.

12. A MEMS array as set forth in claim 1, provided with a substrate and interconnect layer, said interconnect layer provided with a plurality of elements, switches for connecting said elements being provided on the interconnect layer.

13. A MEMS array as set forth in claim 12, wherein said substrate is provided with drive parts for driving said switches.

14. A MEMS array as set forth in claim 13, wherein said substrate is provided with semiconductor circuits for signal processing.

15. A MEMS array as set forth in claim 14, wherein said semiconductor circuits have three-dimensional structures.

16. A MEMS array as set forth in claim 1, wherein the same package packages semiconductor circuits built in.

17. A method of production of a MEMS array providing an interconnect layer on a substrate,

said method of production of a MEMS array characterized by having:

a step of forming a plurality of switches in said substrate and

a step of forming a plurality of elements connected through said plurality of switches in said interconnect layer.

18. A method of production of a MEMS array providing an interconnect layer on a substrate,

said method of production of a MEMS array characterized by having:

a step of forming a plurality of elements in said interconnect layer and

a step of providing a plurality of switches for connecting said plurality of elements on said interconnect layer.

19. A method of production of a MEMS array

providing an interconnect layer on a substrate,

said method of production of a MEMS array characterized by having:

a step of forming switch drive parts on said substrate,

a step of forming a plurality of elements in said interconnect layer, and

a step of providing a plurality of switches for connecting said plurality of elements on said interconnect layer.

20. A method of production of a MEMS device having a plurality of elements of the same arrangement as a MEMS array provided with a plurality of elements and switches for connecting said elements,

said method of production of a MEMS device characterized by having:

a step of determining connection states of switches of said MEMS array and

a step of forming an interconnect layer connecting elements in accordance with the connection states of said switches.

21. A method of production of a MEMS device having a plurality of elements of the same arrangement as a MEMS array provided with a plurality of elements and switches for connecting said elements,

said method of production of a MEMS device characterized by having:

a step of determining connection states of switches of said MEMS array,

a step of forming an interconnect layer connecting elements in accordance with the connection states of said switches on the substrate of said MEMS device, and

a step of forming a plurality of elements of the same arrangement as the MEMS array on said interconnect layer.

22. A method of production of a MEMS device having